

AMENDMENTS TO THE CLAIMS

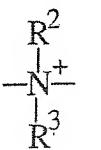
Listing of Claims:

The following listing of claims replaces all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): Linear polyammonium-polysiloxane copolymers containing the repeating unit

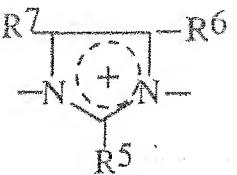
-[Q-V-]- (I)

in which Q is selected from the group consisting of



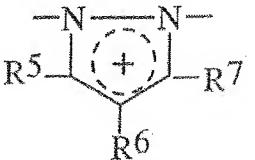
,

a quaternized imidazole unit of the structure



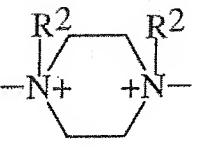
,

a quaternized pyrazole unit of the structure

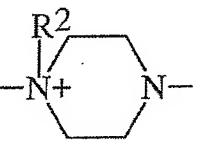


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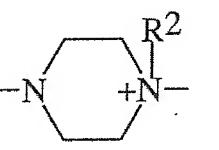
a diquaternized piperazine unit of the structure



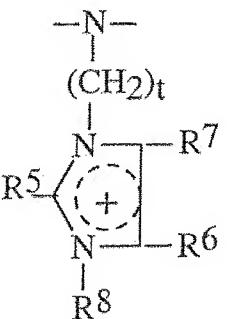
a monoquaternized piperazine unit of the structure



a monoquaternized piperazine unit of the structure



a monoquaternized unit of the structure



in which R² is a monovalent, straight-chain, cyclic or branched, saturated, unsaturated or aromatic hydrocarbon radical having up to 100 carbon atoms, which may contain one or more groups selected from -O-, -NH-, -C(O)- and -C(S)-, and which may if desired be substituted by one or more substituents selected from the group consisting of a hydroxyl group, an unsubstituted or substituted heterocyclic group preferably containing one or more nitrogen atoms, amino, alkylamino, dialkylamino, ammonium, polyether radicals and polyetherester radicals, and, if there are two or more groups -CONR²-, they may be identical or different,

R^3 has the definition of R^2 , it being possible for R^2 and R^3 to be identical or different, or

R^2 and R^3 together with the positively charged nitrogen atom form a five- to seven-membered heterocycle, which if desired may additionally contain one or more nitrogen, oxygen and/or sulfur atoms,

R^5 , R^6 and R^7 can be identical or different and are selected from the group consisting of hydrogen, halogen, hydroxyl group, nitro group, cyano group, thiol group, carboxyl group, alkyl group, monohydroxyalkyl group, polyhydroxyalkyl group, thioalkyl group, cyanoalkyl group, alkoxy group, acyl group, acyloxy group, cycloalkyl group, aryl group, alkylaryl group, and groups of the type $-NHR^W$, in which R^W is hydrogen, alkyl group, monohydroxyalkyl group, polyhydroxyalkyl group, acetyl group or ureido group, and pairs of adjacent radicals R^5 , R^6 and R^7 may, with the carbon atoms bonding them to the heterocycle, form aromatic five- to seven-membered rings, and

R^8 has the definition of R^2 , it being possible for R^8 and R^2 to be identical or different,

Q not bonding to a carbonyl carbon atom,

V represents at least one group V^1 and at least one group V^2

in which

V^2 is selected from divalent or trivalent, straight-chain, cyclic or branched, saturated, unsaturated or aromatic hydrocarbon radicals having up to 1000 carbon atoms (not including the carbon atoms of the polysiloxane radical Z^2 , defined below) and containing, if desired, one or more groups selected from

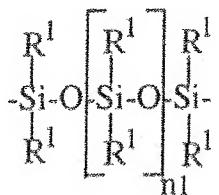
-O-, -CONH-,

-CONR²-, in which R² is as defined above,

-C(O)- and -C(S)-, and

the radical V² may if desired be substituted by one or more hydroxyl groups, and

the radical V² contains at least one group -Z²- of the formula



in which

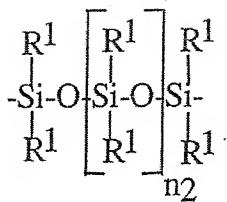
R¹ can be identical or different and is selected from the group consisting of C₁ to C₂₂ alkyl, fluoro(C₁-C₁₀)alkyl and C₆-C₁₀ aryl, and n₁ = 20 to 1000,

V¹ is selected from dihydric or trihydric, straight-chain, cyclic or branched, saturated, unsaturated or aromatic hydrocarbon radicals having up to 1000 carbon atoms, which if desired may contain one or more groups selected from

-O-, -CONH-,

-CONR²-, in which R² is as defined above, it being possible for the groups R² in the groups V¹ and V² to be identical or different,

-C(O)-, -C(S)- and -Z¹-, in which -Z¹- is a group of the formula



in which

R^1 is as defined above, it being possible for the groups R^1 in the groups V^1 and V^2 to be identical or different, and

$n_2 = 0$ to 19,

and the radical V^1 may if desired be substituted by one or more hydroxyl groups,

with the provisos

- that the radical V^1 may not contain any ester group(s) $-C(O)-O-$ and/or $-O-C(O)-$,
- that the trivalent radicals Q and the trivalent radicals V^1 or V^2 serve exclusively for saturating one another within the linear main chain of the stated polysiloxane copolymers; and
- that in the stated polysiloxane copolymer the molar ratio

$$V^2/V^1 \neq 1,$$

and in which the positive charges resulting from the ammonium groups are neutralized by organic or inorganic acid anions,

and the acid addition salts thereof.

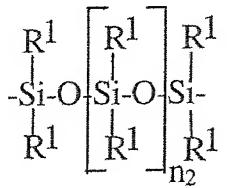
Claim 2 (previously presented): Linear polyammonium-polysiloxane copolymers according to claim 1, in which V^2 is a group of the formula

-V^{2*}-Z²-V^{2*}-

in which Z² is as defined above and V^{2*} is a divalent straight-chain cyclic or branched, saturated, unsaturated or aromatic hydrocarbon radical having up to 40 carbon atoms, which if desired may contain one or more groups selected from -O-, -CONH-, -CONR²-, in which R² is as defined above, -C(O)- and -C(S)-, and the radical V^{2*} may if desired be substituted by one or more hydroxyl groups.

Claim 3 (previously presented): Linear polyammonium-polysiloxane copolymers according to claim 1, in which the group V¹ is selected from divalent, straight-chain, cyclic or branched, saturated, unsaturated or aromatic hydrocarbon radicals having up to 600 carbon atoms, which may if desired contain one or more groups selected from

-O-, -CONH-, -CONR²-, in which R² is as defined above, -C(O)-, -C(S)- and -Z¹-, in which -Z¹- is a group of the formula



in which

R¹ is C₁ to C₃ alkyl, fluoro(C₃-C₆)alkyl or C₆ aryl, and
n₂ is as defined above.

Claim 4 (previously presented): Linear polyammonium-polysiloxane copolymers according to claim 1, in which the molar ratio V²/V¹ complies with the relationship

$$V^2/V^1 < 1.$$

Claim 5 (previously presented): Linear polyammonium-polysiloxane copolymers according to claim 1, in which the molar ratio V²/V¹ complies with the relationship

$$0.0005 < V^2/V^1 < 0.9.$$

Claim 6 (previously presented): A process for preparing the linear polyammonium-polysiloxane copolymers according to claim 1, in which

- a) at least one amine compound selected from a diamine compound and/or a primary or secondary monoamine compound is reacted with at least two difunctional organic compounds capable of reacting with the amino functions of the amine compound, the molar ratio of the organic compounds being chosen so as to meet the condition V²/V¹ ≠ 1,
- b) at least two moles of an amine compound selected from a diamine compound and/or a primary or secondary monoamine compound are reacted with one mole of a difunctional organic compound capable of reacting with the amino functions of the amine compound, to form a diamine compound (monomer), which is subsequently reacted with at least one amine compound selected from a diamine compound and/or a primary or secondary monoamine compound and with at least one further difunctional organic compound capable of reacting with the amino functions of the amine compounds,
- c) an amine compound selected from a diamine compound and/or a primary or secondary monoamine compound is reacted with a difunctional organic compound capable of reacting with the amino functions of the amine compounds, to form a diamine compound (amino-terminated oligomer), which is subsequently reacted with at least one difunctional organic compound capable of reacting with the amino functions of the diamine compounds,
- d) an amine compound selected from a diamine compound and/or a primary or secondary monoamine compound is reacted with a difunctional organic compound capable of reacting with the amino functions of the amine compound, to form a difunctional compound capable of reacting with amino functions (difunctional

oligomer), which is subsequently reacted with at least one amine compound selected from a diamine compound and/or a primary or secondary monoamine compound and with at least one further compound capable of reacting with amino functions, it being possible if desired to add monofunctional, preferably tertiary, monoamines or suitable monoamines not capable of chain propagation, and/or monofunctional compounds capable of reacting with amino functions, as chain terminators, and the stoichiometry of the amino functions and the functional groups capable of reacting with amino functions always being approximately 1:1 in the last stage of the reaction, and it being possible for any amino functions present to be protonated, alkylated or quaternized.

Claim 7 (previously presented): The process according to claim 6, in which the functional groups of the difunctional compounds capable of reacting with amino functions are selected from the group consisting of epoxy groups and haloalkyl groups.

Claim 8 (currently amended): The use of A process of applying a cosmetic comprising applying a composition including the linear polyammonium-polysiloxane copolymers according to claim 1 in cosmetic formulations, in laundry detergents or for surface treating substrates.

Claim 9 (currently amended): The use A process of treating fibers or finishing fibers comprising applying the formulation according to claim 8 1 for fiber treatment and/or fiber finishing to fibers.

Claim 10 (previously presented): Compositions comprising at least one linear polyammonium-polysiloxane copolymer according to claim 1, together with at least one further ingredient customary for the composition.

Claim 11 (currently amended): A laundry detergent composition comprising the composition according to claim 10, being a laundry detergent composition or a cosmetic composition.

Claims 12-14 (canceled)

Claim 15 (new): A process of washing laundry comprising applying the linear polyammonium-polysiloxane copolymer according to claim 1 to laundry.

Claim 16 (new): A process of surface treating a substrate comprising applying the polyammonium-polysiloxane compound of claim 1 to the substrate.

Claim 17 (new): A cosmetic composition comprising the composition according to claim 10.